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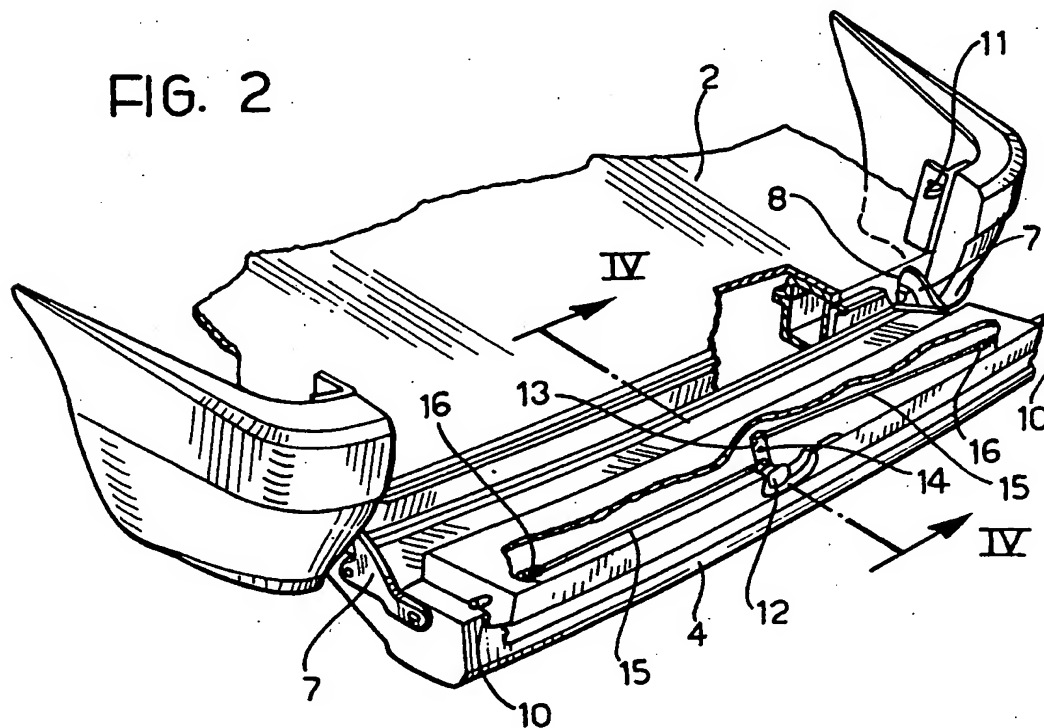
US 3533654

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(58) Field of search
B7B

(54) Rear bumper for a motor vehicle having a hinged rear closure, e.g. a tail-gate or boot lid

(57) The rear bumper has at least a central part (4) articulated at its lower part to the body of the motor vehicle and movable between a raised travelling position and a lower position as shown in which access to the load-carrying floor (2) is facilitated.



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FIG. 1

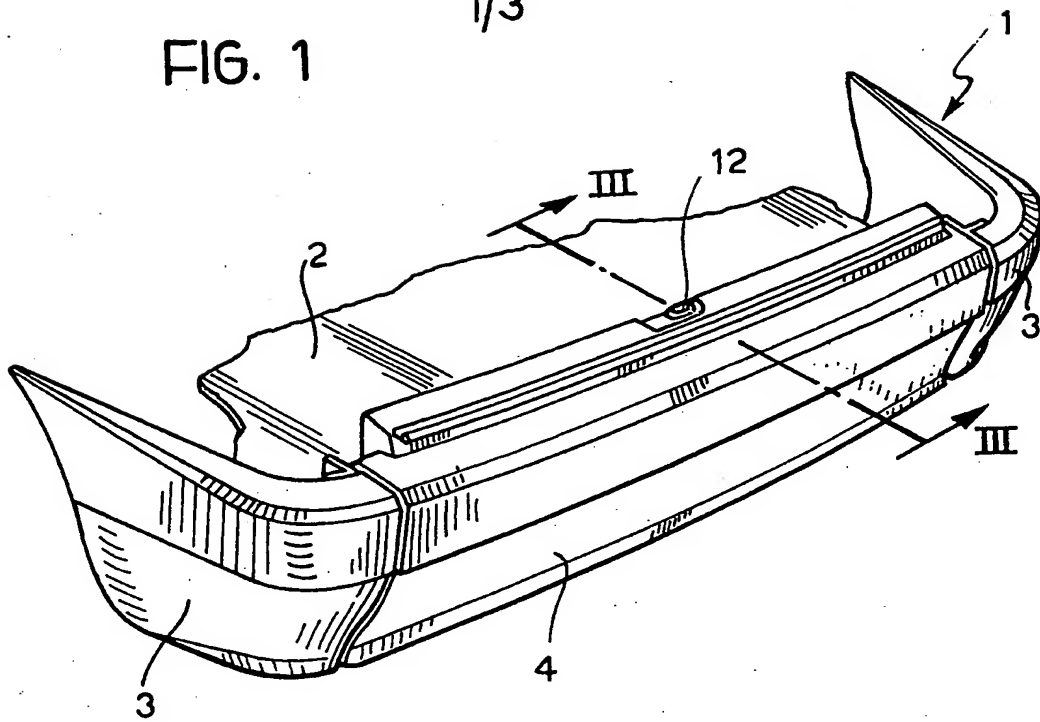


FIG. 2

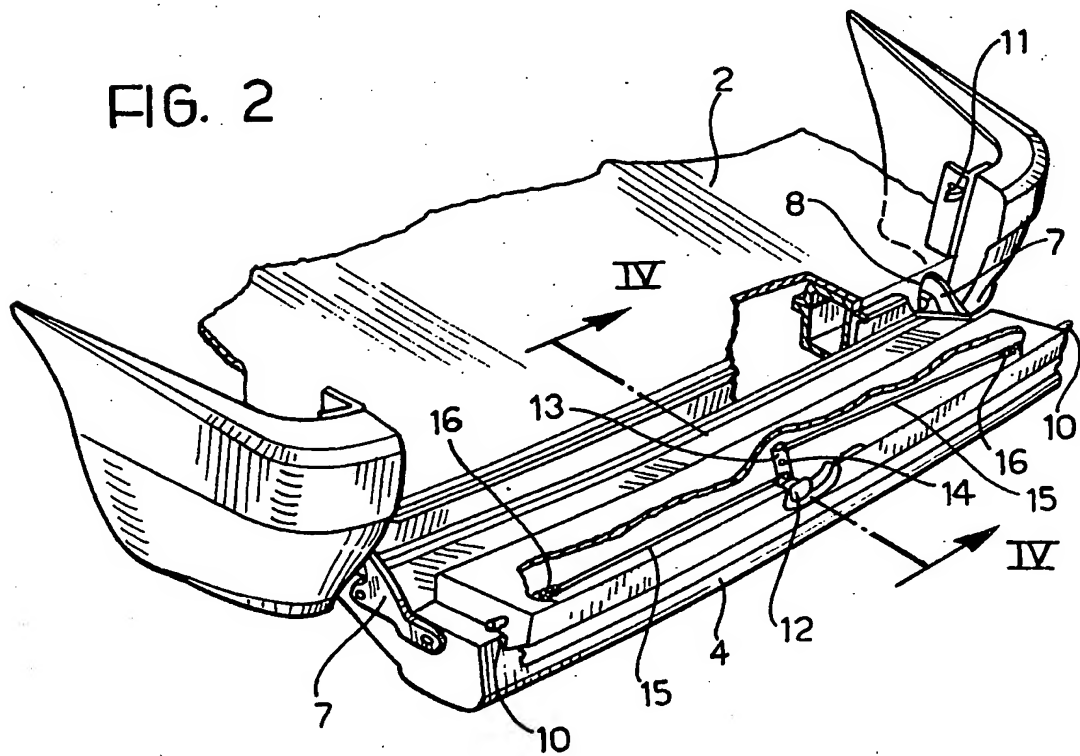


FIG. 3

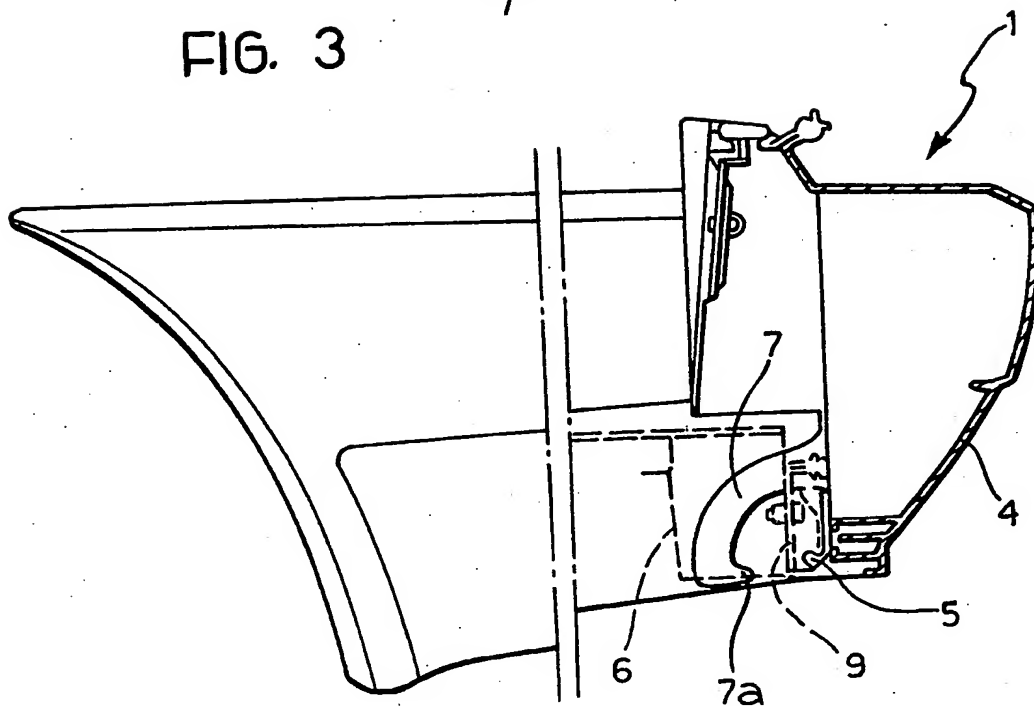


FIG. 4

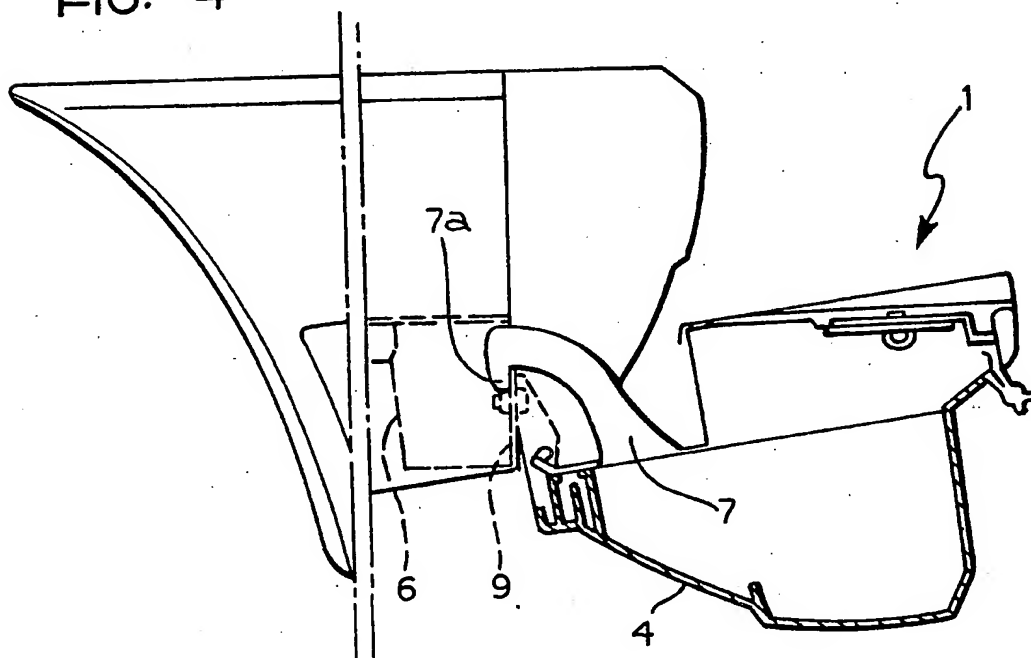
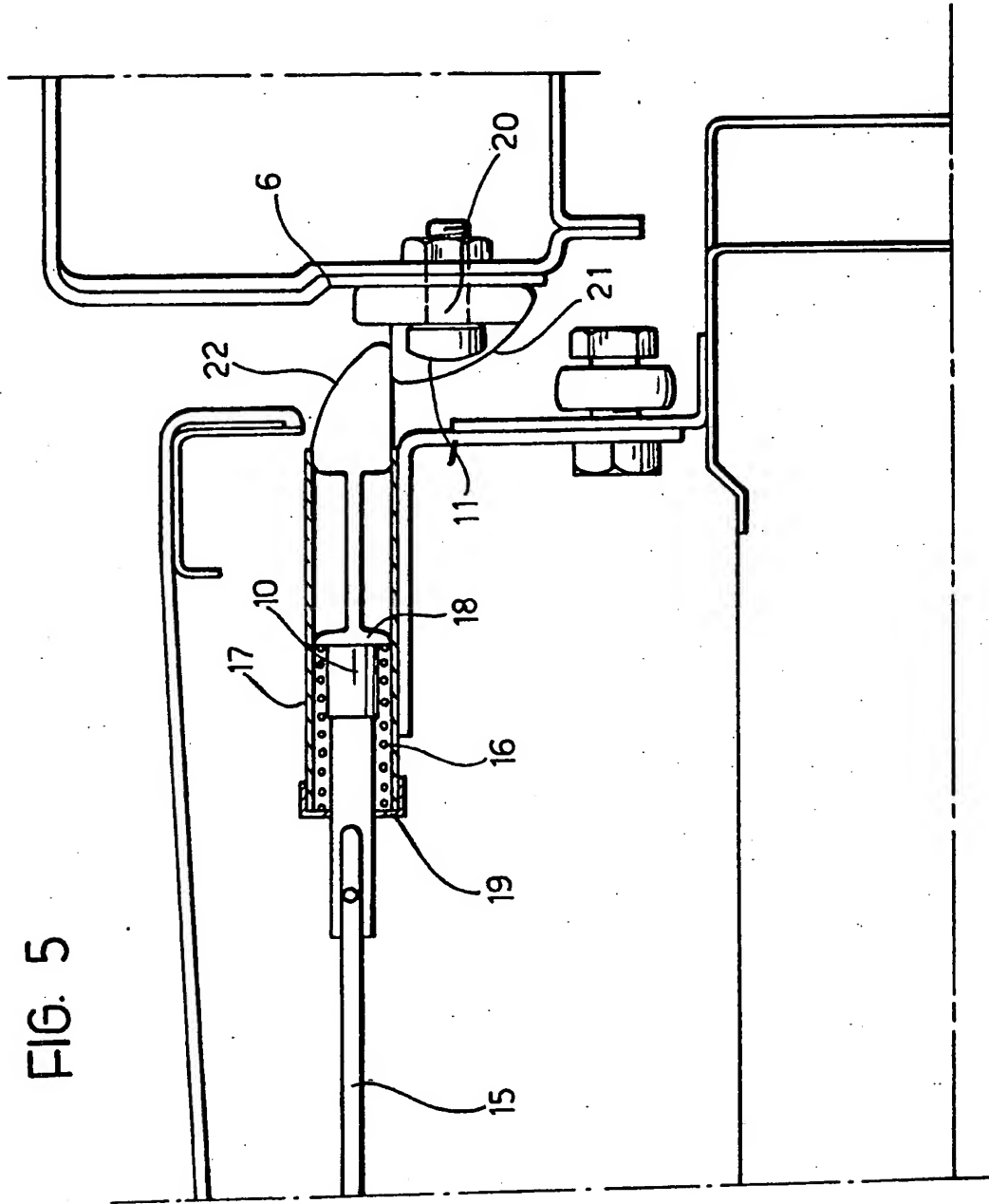


FIG. 5



SPECIFICATION

Rear bumper for a motor vehicle having a hinged rear closure, e.g. a tail-gate or boot lid

The present invention relates to motor vehicles having hinged rear closures, e.g. tail-gates or boot lids, which allow access to a load-carrying floor.

The main characteristic of the invention lies in the fact that the rear bumper of the motor vehicle has at least a central part which is articulated at its lower part to the body of the vehicle and is movable between a raised travelling position and a lowered position in which access to the load-carrying floor is facilitated.

Preferably, the central part of the rear bumper of the motor vehicle according to the invention has two lateral brackets which are slidable in two apertures formed in a wall of the motor vehicle body and have end portions arranged to engage the inner surface of the wall of the body to define the lowered position of the central part of the bumper.

According to a further preferred characteristic, the central part of the rear bumper is provided laterally with two bolts which are resiliently biased towards an extended position and are arranged to cooperate with catch members fixed to the body of the motor vehicle to lock the central movable part of the rear bumper in its raised position.

Preferably, the rear bumper has a central knob for operating the two bolts.

Further characteristics and advantages of the invention will become apparent from the description which follows with reference to the appended drawings, provided purely by way of non-limiting example, in which:-

Figures 1 and 2 are two partial perspective views illustrating the rear part of a motor vehicle according to the invention with the central part of the bumper in the raised position and in the lowered position, respectively.

Figures 3 and 4 are sections taken on the lines III-III and IV-IV, and

Figure 5 is a sectional view of a detail of the bumper illustrated in Fig. 1 on an enlarged scale.

In Figs. 1 and 2, the rear bumper of a motor vehicle having a tail-gate or boot lid (not shown) for access to a load-carrying floor is generally indicated at 1.

The rear bumper 1 includes two side portions 3 which are fixed to the body of the motor vehicle, and a central portion 4 of a length corresponding to the width of the tail-gate or boot lid.

The central part 4 of the bumper 1 is articulated at its lower part about a horizontal axis 5 to a part 6 of the body of the motor vehicle (illustrated in broken outline in Figs. 3 and 4).

The central part 4 of the rear bumper is movable between a raised travelling position illustrated in Fig. 1 and a lowered position illustrated in Fig. 2. When the bumper is in the position illustrated in Fig. 1 it projects above the load-carrying floor 2. In the position illustrated in Fig. 2, therefore, it facilitates access to the load-carrying floor.

The movable part 4 of the bumper is provided laterally with two brackets 7 (see Figs. 2, 3 and 4) which are slidable in apertures 8 formed in a wall 9 of the body of the motor vehicle. Each bracket 7 has a hooked end portion 7a which engages the inner surface of the wall 9 in the lowered position of the central part 4 of the bumper so as to act as an end-of-travel stop. In the lowered position, the two brackets 7 support the weight of the part 4 and prevent its further lowering.

According to a further characteristic, the movable part 4 of the rear bumper has two lateral bolts 10 resiliently biased towards an extended position and arranged to cooperate with two catch members 11 fixed to the body of the motor vehicle (see Fig. 2).

The bolts 10 are operated by a central knob 12 located on the upper part of the bumper for easy access and fixed to one end of a lever 13 articulated centrally at 14 to the structure of the part 4 of the bumper. The lever 13 is also connected by rigid rods 15 to the bolts 10 to enable the withdrawal of the bolts against the action of springs 16.

Fig. 5 illustrates in detail a bolt 10 which is slidable in a tubular part 17 of the movable bumper 4. The respective helical spring 16 is interposed between a larger diameter portion 18 of the bolt 10 and a cap 19 fixed over one end of the tubular part 17.

The catch member 11 is fixed by a bolt 20 to the body 6 and has an inclined surface 21 for cooperating with a corresponding surface 22 of the end portion of the bolt 10 to allow the snap-engagement of the bolt 10 with the catch member 11 when the movable part 4 of the rear bumper is brought into its raised position.

Naturally, the present invention also applies to other embodiments which achieve equal utility by using the same innovative concept.

CLAIMS

1. A motor vehicle having a hinged rear closure, e.g. a tail-gate or boot lid, for access to a load-carrying floor, wherein the rear bumper of the motor vehicle has at least a central part articulated at its lower part to the body of the motor vehicle and movable between a raised travelling position and a lowered position in which access to the load-carrying floor is facilitated.

2. A motor vehicle according to Claim 1, wherein the central part of the rear bumper has two lateral brackets which are slidable in two apertures formed in a wall of the motor

vehicle body and have end portions arranged to engage the inner surface of the wall of the body to define the lowered position of the central part of the rear bumper.

- 5 3. A motor vehicle according to Claim 1 or 2, wherein the central part of the rear bumper is provided laterally with two bolts which are resiliently biased towards an extended position and are arranged to cooperate
10 with catch members fixed to the body to lock the central part of the rear bumper in its raised position.

4. A motor vehicle according to Claim 3, wherein the rear bumper has a central knob
15 for operating the bolts.

5. A motor vehicle according to Claim 3 or 4, wherein the two bolts have shaped end portions arranged to cooperate with corresponding inclined surfaces of the catch member to enable snap-locking of the central part
20 of the rear bumper when the latter is brought into its raised position.

6. A motor vehicle having a hinged rear closure, e.g. a tail-gate or boot lid, and a rear
25 bumper substantially as hereinbefore described and as illustrated in the accompanying drawings.